POWER EQUIPMENT

CCRE

Constant Current Regulator

Compliance with Standards

ICAO

FAA

STANAG

IEC: 61822

Overview

The ADB SAFEGATE Control System for Airfield Lighting – COSAL is used for supplying, controlling and monitoring series circuits.

The CCRE, a component of the COSAL system, has been developed specifically for use in airport lighting systems, and serves to ensure dependable supply to series circuits featuring lights or taxi traffic signage.

Power

Input voltage (for single- or two-phase power supply)	230 V AC/ 400 V AC ±10%
Input current, depending on the regulator type involved	max. 50 A / 80 A / 100 A
Line frequency	50 Hz ± 7.5%
Output current	max. 6.6 A
Efficiency	> 90%
Remote control voltage	1 x 24 V DC / 10 W
Optional	1 x 60 V DC / 10 W

Construction

The CCRE is designed as a 19" drawer, featuring at the front a back-lit 4-line LCD display, plus a membrane keyboard for parameterization and manual operator control. A cubicle system (which can also be provided in different installation heights) serves to accommodate a maximum of 8 regulator drawers with a possible 16 control circuits. Both the power and control connections are created by plugging in the plug connectors provided at the rear.

Features

- Direct field bus connection (CAN bus simple or redundant, RCOM, parallel connection or Profibus)
- Connection of other field bus systems (e.g. Interbus S) possible using a bus converter
- All operating parameters can be modified using intuitive menu prompting and an integrated membrane keyboard
- Parameterization alternatively via:
  - CAN field bus or
  - Serial parameterization interface (RJ45) on the front panel
- Continual display of the following operational data of the regulator:
  - circuit designation (e.g. TXE 006, THR 19-1, etc.)
  - setpoint values of the categories, the series circuit current and the power rate (optional)
  - actual values of the categories, the series circuit current and the power rate (optional)
- Continual display of the following data from the series circuit:
  - insulation resistance value
  - lamp failure (percentage / numerical)
- Storage of all operational parameters on a replaceable SIM card, obviating the need for recalibration after a regulator replacement
- Insulation resistance display integrated in the regulator drawer
- Microprocessor-controlled, fully digital
- 8 brightness levels and Level 0 can be set
- Integration option for a module providing individual lamp control (RELIANCE IL III)
- 1 or 2 control circuits in a 19" drawer
- Can be supplied for system cubicles, combined cubicles or for compact regulators
- On-the-spot operator control using a membrane keyboard
- Option for switching between local and remote control using a toggle switch or a separate lockswitch

CCRE

Technical Data

Parallel Interface:	Input: 24 V DC / 10 mA Output: 24 V DC / 30 mA
Optional	Input: 60 V DC / 10 mA Output: 60 V DC / 30 mA
Serial Interface: depending on the regulator type involved	2 x RS 232, RCOM or 2x Profibus
Feldbus	2 x CAN 2.0
Brightness levels	8, user-configurable on each level within the tolerance range of the current
Response time and shut-down behavior to IEC61822 Control rate	30 A/s
Control precision	1%
Humidity (non-condensing)	max. 95% rel.
Installation site / air pressure	< 2000 m above sea level
Operating temperature range	-5°C – +50°C
Transport / storage	-25°C – +55°C
Degree of protection	IP 40
Dimensions (W x H x D)	483 x 132 x 509 mm

Ordering Code

Type	Interface			Supply				Double CCRE	Lockswitch
	CAN/RCOM	Profibus	RELIANCE IL III	1-phase 50 A	2-phase 50 A	2-phase 80 A	2-phase 100 A		
CCR 503-E	X			X					
CCR 507-E	X			X				X	
CCR 501-E	X		X	X					
CCR 505-E	X		X/X	X				X	
CCR 506-E	X		X/-	X				X	
CCR 806-E	X					X			
CCR 805-E	X		X			X			
CCR 106-E	X						X		
CCR 105-E	X		X				X		
CCR 530-E		X			X				X
CCR 531-E		X	X		X				X
CCR 522-E		X			X			X	X
CCR 525-E		X	X/X		X			X	X
CCR 116-E		X					X		X
CCR 117-E		X	X				X		X